Mine Warfare

Discussion

This essential warfare capability is integral to the ability of naval forces to effectively open and maintain sea lines of communication and to operate in the littoral battlespace. A considerable array of modern mine countermeasure (MCM) systems continues to be developed and procured for MCM forces.

The U. S. Navy's dedicated MCM force is comprised of 14 MCM-1 class ships, 12 MHC-51 class mine countermeasures ships and two squadrons of MH-53 airborne mine countermeasures helicopters. It also includes Navy Special Operations Forces composed of 15 MCM specialized explosive ordnance detachments, 2 MCM Marine Mammal

System (MMS) detachments, and a specialized Very Shallow Water Detachment. The experimental Very Shallow Water (VSW) MCM Detachment, made up of Navy Explosives, Ordnance and Disposal personnel; Navy SEALS; and Force Reconnaissance Marines has proven to be a viable near term solution to critical operational shortfalls in VSW regions. The detachment is comprised of three platoons (mammals, divers, and unmanned underwater vehicles (UUVs)), providing an immediate MCM response via fly-in or transportation on ARG shipping, bringing an essential capability to a technologically challenging environment. In the mid-term, the intent is to replace the divers and mammals with semi or fully autonomous UUVs that can detect, classify, and neutralize mines in the VSW region. These forces are task-organized in a triad of Surface MCM (SMCM), Airborne MCM (AMCM), and EOD. The triad concept provides sustained combined capability MCM operations on short notice. The USS INCHON (MCS-1) provides a dedicated MCM command,

control, and support ship to coordinate and support multi-faceted MCM operations with surface, air, and Special Operations Forces.

The Navy's forward deployment of MCM ships in the Arabian Gulf and in the Western Pacific has significantly reduced the time required for SMCM forces to respond to multiple CINC MCM requirements in two likely areas of confrontation. Near term improvements to the dedicated force include upgrading the AN/AQS-14 airborne mine hunting sonar, improving the MK-105 influence minesweeping sled system, and providing the MH-53 with an organic mine neutralization system.

The Navy has invested in an aggressive programmatic initiative to deploy a fully capable organic MCM systems package with a Carrier Battle Group (CVBG). This systems' capability will allow the Task Force to conduct mine reconnaissance, mine hunting, minesweeping, and mine clearance to support maneuver in a mined environment. The far term goal is to outfit all Carrier Battle Groups and Amphibious Readiness Groups with some level of organic MCM systems packages to keep ships and personnel out of mine danger areas, while effectively conducting MCM operations.

Focused science and technology and developmental efforts are producing technological solutions to difficult mine warfare problems. For VSW and surf zone regions, efforts such as the Shallow Water Assault Breaching System and the Distributed Explosive Technology Net System are in development. These systems are designed to be used together to defeat mines and obstacles from the seaward edge of the VSW to the high water mark. The Remote Mine Hunting System (RMHS) is another system being supported to improve organic MCM capability. It will provide an organic, surface ship-hosted mine reconnaissance capability.

Marine Corps Position

To improve critical deficiencies in MCM continued support of the Shallow Water Mine Countermeasure Program is crucial. Focused science and technology and developmental efforts to provide capabilities to detect, avoid, clear, and neutralize mine threats will allow optimization of naval expeditionary force and power projection capabilities.